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ABSTRACT

This survey gathered data about the teaching specialties of those who, between September 1, 1977 and August 31, 1978, had completed all requirements to teach at the elementary or secondary education levels. Parallel estimates for the year September to August, 1979 were also obtained. This survey of persons newly qualified to teach provides a view of the potential, rather than the present supply of teachers. Results are arranged by teaching specialty. A sample of the survey instrument and a discussion of the methodology used in the survey are appended. (JD)

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Newly Qualified Elementary and Secondary School Teachers, 1977-78 and 1978-79

Frank J. Atelsek and Irene L. Gomberg

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Acknowledgments

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We wish to thank the Panel's Federal Advisory Board and its Technical Advisory Committee and, of course, our HEP representatives for their continued high level of performance and cooperation.

Highlights

- Approximately 217,000 persons became eligible for the first time during 1977-78 to teach in elementary or secondary schools.
- Of the total, 187,900 (87 percent) were qualified at the bachelor's level, and 29,300 (13 percent) were qualified at the master's level.
- Of teachers at all levels, 13 percent became eligible for certification in special education.
- Almost half of the teachers at the B.A. level were qualified to teach various subject areas, 37 percent were qualified in elementary education, 12 percent in special education, and 3 percent in vocational education.
- The total number of new teachers was expected to drop by 3 percent between 1977-78 and 1978-79-- by 2 percent at the B.A. level and by 9 percent at the M.A. level.
- At the bachelor's level, greater-than-average decreases were anticipated in the number of newly qualified teachers of geology (11 percent) and of education of the mentally retarded (10 percent).
- At the B.A. level, significant increases were projected for teachers of bilingual education (46 percent), reading (16 percent), physics (11 percent), and education of the orthopedically handicapped (10 percent).

Background

The study reported here was conducted by the Higher Education Panel at the request of the National Center for Education Statistics (NCES), U.S. Department of Health, Education, and Welfare. It constitutes part of NCES's continuing commitment to monitor changes in the demand for and availability of qualified elementary and secondary school teachers.

The present survey gathered data for September 1, 1977, to August 31, 1978, by teaching specialty, on the number of people who, for the first time, had completed all requirements to teach at the elementary and secondary education levels; parallel estimates for the year September 1, 1978, to August 31, 1979, were also obtained. The survey does not provide information about the current demand for teachers. Demand data can be obtained only from the school systems that employ the teachers. Nor does the survey provide a comprehensive picture of teacher supply, which would include not only newly certified teachers but also persons certified in previous years who are seeking teaching positions.

It is important to note that NCES and the National Education Association (NEA) have conducted studies that include both the supply of and demand for newly qualified teachers: NCES recently published Teacher and School Administrator Supply and Demand, which presents selected findings from two of its earlier surveys: Survey of Recent College Graduates (1974-75) and Local Education Agency Survey of Teacher and Administrator Shortages (1977).[1] Shortly thereafter, NEA released its annual Teacher Supply and Demand in Public Schools for 1978.[2] However, owing to extreme differences in their methodologies, definitions, and eligible populations, the findings from the two reports cannot reasonably be compared with each other or with those from the HEP survey. The differences are discussed in Appendix B.

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[1] NCES78-131 (Washington: U.S. Government Printing Office, 1979).

[2] Washington: National Education Association, 1979.

The present survey of persons newly qualified to teach, it should be further noted, provides a view of the potential rather than the actual supply of teachers. The earlier analysis by NCES shows that, of the number who gained eligibility to teach for the first time in 1975-76, 23 percent did not apply for teaching jobs. Of those who did apply for teaching positions, only 54 percent were teaching full time, 10 percent were teaching part time, and the remaining 36 percent were not teaching at all. Thus, if this earlier experience is applicable to the present, fewer than half of the potential teachers identified in this survey will be in teaching positions during the year following their eligibility.

Methods Summary

The Higher Education Panel is an ongoing survey research program created in 1971 by the American Council on Education to conduct limited-scale surveys on topics of current policy interest to the higher education community and to government agencies. The Panel itself is a disproportionate stratified sample of 760 colleges and universities drawn from the more than 3,000 institutions included in the NCES Education Directory listing of 1974-75. Each institution in the population is classified in terms of the set of variables constituting the Panel's stratification design, based primarily on type (university, four-year college, two-year college), control (private, public), and size (full-time-equivalent enrollment). For any given survey, either the entire Panel or an appropriate subset may be used.

The survey reported here was limited to colleges and universities that offered teacher preparation programs. The survey instrument (Appendix A) was mailed on November 22, 1978, to the 438 Panel members that met this criterion. Mail and telephone follow-ups were conducted during December 1978 and January 1979. By the deadline for returning questionnaires, usable responses had been received from 384, or 88 percent, of the institutions.

Respondents and nonrespondents are compared in Appendix B, which also presents the standard errors of the reported national estimates.

Respondents were asked to report the number of people who, *for the first time*, completed all requirements to teach in elementary or secondary schools. Bachelor's-level teachers are reported by various teaching specialty fields, and master's-level teachers are identified as qualified in either "special education" or "all other fields."[3] Excluded from the statistics were persons at the B.A. or M.A. level whose only specialty field was education administration and those eligible for certification in library science alone.

Most newly eligible teachers receive their degrees at the same time they fulfill all requirements for certification. The present survey, however, included people who received their degrees at any time in the past but completed or would complete all certification requirements during the two years under study. The survey also included persons who had received their degrees in fields other than education.

If a teacher graduated with both a major and a minor and was qualified in both specialties, he or she was reported in only the major field of specialty. If others completed requirements in more than one specialty field, each was reported in the field for which he or she was best prepared. *Each person was to be reported only once.*

Weights were computed on the assumption that, within each stratification cell, institutions with teacher education programs in the Panel were representative of those in the entire population. Weights were computed separately to allow for differential item response. The resulting cell and item weights were applied to the responses of each institution, and the weighted data were then aggregated into the broad institutional categories used in the survey analyses.

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[3]Special education included such fields as education of the emotionally disturbed, learning disabled, mentally retarded, orthopedically handicapped, and speech impaired. See the questionnaire in Appendix A for a full listing of fields.

Findings

Between September 1, 1977, and August 31, 1978, an estimated 217,200 persons became eligible for the first time to teach in elementary or secondary schools. Nearly nine of every ten teachers were qualified at the bachelor's level. Approximately 13 percent of the total became eligible in special education. See table A.

Table A: Degree Level of Newly Qualified Teachers, 1977-78

Teaching Specialty	Total	BA Recipients	MA Recipients
Total	217,200	187,900	29,300
Special education	13%	12%	24%
All other fields	87%	88%	76%

At the master's level, 24 percent of teachers completed their eligibility requirements in the field of special education, compared with 12 percent at the bachelor's level. In fact, of all teachers who became eligible for certification in special education, one-fourth had a master's degree.

The majority (77 percent) of new teachers were trained at public institutions, principally at four-year colleges. See table B.

Table B: Source of Training of Newly Qualified Teachers, 1977-78

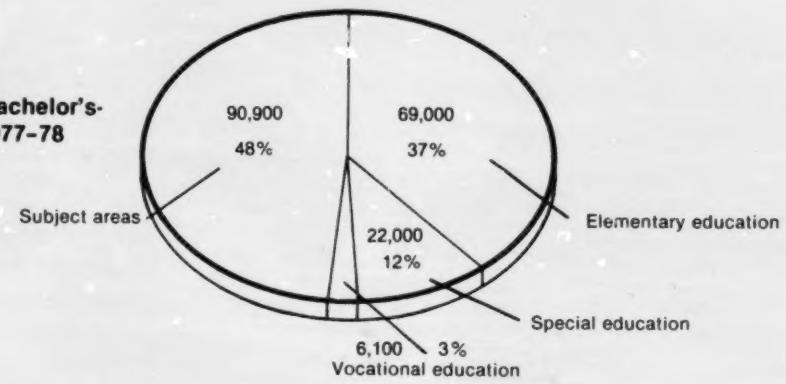
Institutional Type	Number	Percentage
Total	217,200	100
Public	167,900	77
Universities	49,700	23
Four-year colleges	118,200	54
Private	49,300	23
Universities	10,200	5
Four-year colleges	39,200	18

Note: Here and in subsequent tables, subtotals may not add exactly to their corresponding totals because of weighting and rounding.

Bachelor's Level

Of the 187,900 new teachers at the B.A. level, nearly half qualified in subject areas and four of every ten qualified in elementary education. Twelve percent were eligible to teach special education, and 3 percent, vocational education. See figure 1.

Figure 1: Distribution, by Specialty Field, of Newly Qualified Bachelor's-Level Teachers, 1977-78



Among the 90,900 new teachers who qualified in subject areas, the greatest number were trained in health, physical education, and recreation (one-fourth), followed by the social sciences (one-seventh), and English language arts (one-eighth). See table C.

Table C: Subject Areas of Newly Qualified B.A.-Level Teachers, 1977-78

Subject Areas	Number	Percentage
Total	90,900	100
Health, physical education, recreation	22,800	25
Men	(12,400)	(14)
Women	(10,400)	(11)
Social sciences	13,100	14
English language arts	10,800	12
Music	9,100	10
Natural sciences	6,700	7
Art	6,200	7
Business (nonvocational)	5,100	6
Mathematics	4,400	5
Industrial arts (nonvocational)	3,600	4
Foreign languages	3,500	4
Other	5,500	6

Estimates for 1978-79

At all institutions, as shown in Table 1, the supply of new teachers was expected to decline by 3.0 percent over the next year, to about 210,700. Private institutions, principally four-year colleges, anticipated a slightly greater rate of decline (4.1 percent and 4.4 percent, respectively). Public four-year colleges projected a decrease of 2.2 percent, whereas public universities projected a 3.9 percent decrease.

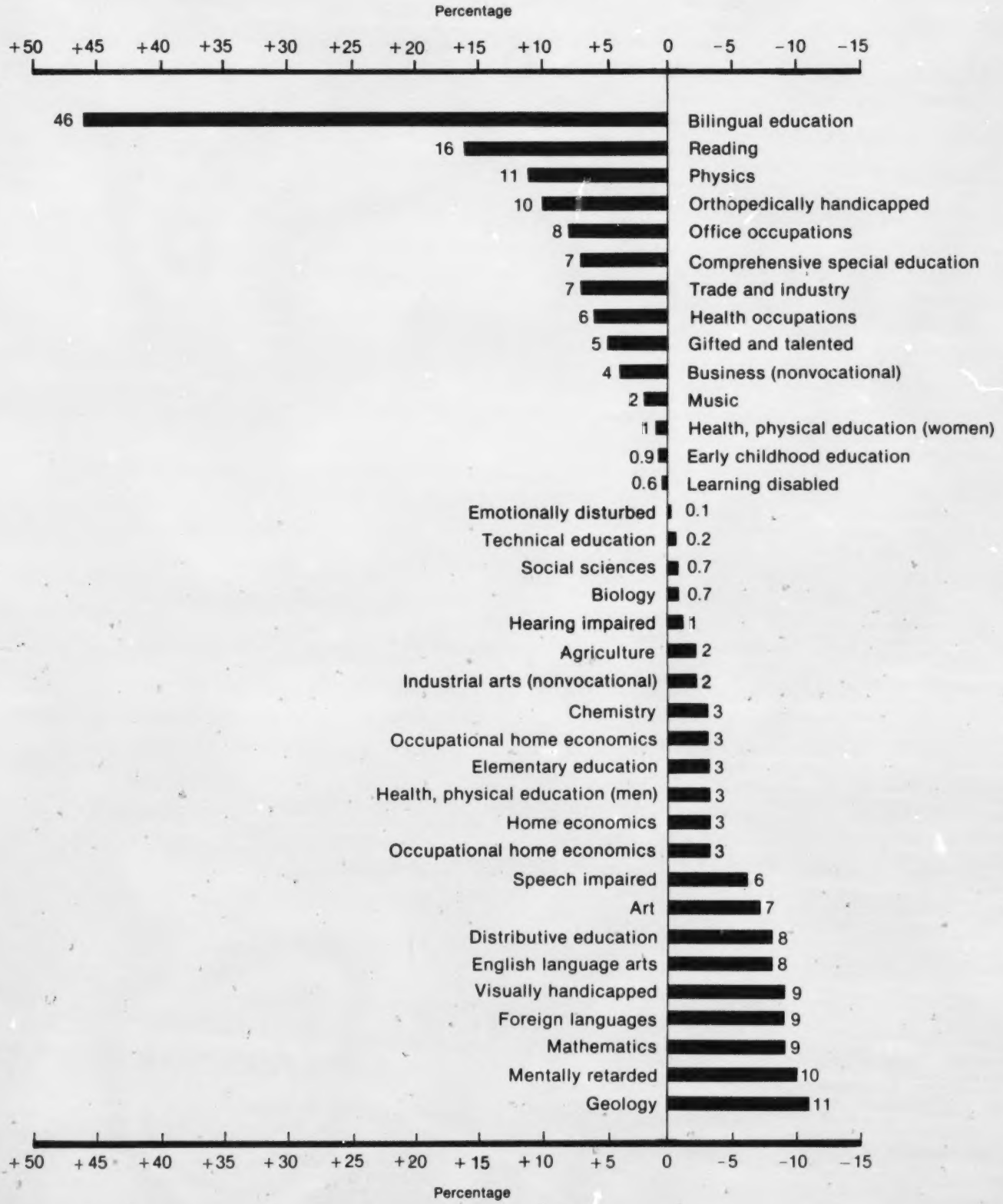
Colleges and universities estimated that the field of special education would experience a 2.7 percent drop. That drop was expected to be negligible at all public institutions (0.3 percent) but relatively high at private institutions (13.3 percent), particularly the four-year colleges (16.6 percent).

An 8.9 percent decrease was estimated for the number of new M.A.-level teachers during 1978-79. The rate was expected to be highest at private four-year colleges (17.1 percent) and lowest at public universities (1.5 percent). See Table 2.

At the B.A. level, a 2.1 percent decrease was estimated overall. Public universities, which in 1977-78 trained approximately 23 percent of the B.A.-level teachers, anticipated losing 4.3 percent. In contrast, private universities, which produced less than 4 percent of B.A.-level teachers, anticipated approaching a 2 percent increase. Possibly at these latter institutions the capacity for teacher production and their locations are such that they can absorb a modest growth. See Tables 3-9.

Among new bachelor's-level teachers, the percentage distribution by field of specialty was expected to remain relatively constant. Several fields, however, projected greater-than-average decreases, among them geology at 11 percent and education of the mentally retarded at 10 percent. Despite decreases in most specialties in teacher education at the bachelor's level, institutions estimated increases for several fields in the number of newly qualified teachers, the most significant being bilingual education, 46 percent; reading, 16 percent; physics, 11 percent; and education of the orthopedically handicapped, 10 percent. See figure 2.

Figure 2:
Percentage Change, by Specialty Fields, of Newly Qualified Bachelor's-Level Teachers, 1977-78—1978-79



Basic Report Tables

Table 1

Newly Qualified Teachers, Bachelor's and Master's Recipients, 1977-78 and 1978-79, Type and Control of Institution

Teaching Specialty	1977-78 Number	1977-78 Percent	1978-79 Number	1978-79 Percent	Percentage Change
			ALL INSTITUTIONS		
Special education	29,099	13.4	28,319	13.4	-2.7
All other	188,136	86.6	182,386	86.6	-3.1
Total	217,235	100.0	210,705	100.0	-3.0
			PUBLIC INSTITUTIONS		
Special education	23,731	14.1	23,664	14.5	-0.3
All other	144,161	85.9	139,740	85.5	-3.1
Total	167,892	100.0	163,404	100.0	-2.7
			PRIVATE INSTITUTIONS		
Special education	5,368	10.9	4,655	9.8	-13.3
All other	43,975	89.1	42,646	90.2	-3.2
Total	49,343	100.0	47,301	100.0	-4.1
			PUBLIC UNIVERSITIES		
Special education	6,105	12.3	6,087	12.7	-0.3
All other	43,599	87.7	41,675	87.3	-4.4
Total	49,704	100.0	47,762	100.0	-3.9
			PRIVATE UNIVERSITIES		
Special education	2,273	22.4	2,075	21.1	-8.7
All other	7,883	77.6	7,772	78.9	-1.4
Total	10,156	100.0	9,847	100.0	-3.0
			PUBLIC FOUR-YEAR COLLEGES		
Special education	17,626	14.9	17,577	15.2	-0.3
All other	100,562	85.1	98,065	84.8	-2.5
Total	118,188	100.0	115,642	100.0	-2.2
			PRIVATE FOUR-YEAR COLLEGES		
Special education	3,095	7.9	2,580	6.9	-16.6
All other	36,092	92.1	34,874	93.1	-3.4
Total	39,187	100.0	37,454	100.0	-4.4

Table 2

Master's Recipients Newly Qualified to Teach, 1977-78 and 1978-79, Institutional Type and Control

Teaching Specialty	1977-78 Number	1977-78 Percent	1978-79 Number	1978-79 Percent	Percentage Change
			ALL INSTITUTIONS		
Special education	7,076	24.2	6,613	24.8	-6.5
All other	22,217	75.8	20,073	75.2	-9.7
Total	29,293	100.0	26,686	100.0	-8.9
			PUBLIC INSTITUTIONS		
Special education	5,119	22.7	4,987	23.7	-2.6
All other	17,459	77.3	16,014	76.3	-8.3
Total	22,578	100.0	21,001	100.0	-7.0
			PRIVATE INSTITUTIONS		
Special education	1,957	29.1	1,626	28.6	-16.9
All other	4,758	70.9	4,059	71.4	-14.7
Total	6,715	100.0	5,685	100.0	-15.3
			PUBLIC UNIVERSITIES		
Special education	1,196	17.6	1,247	18.6	+4.3
All other	5,599	82.4	5,444	81.4	-2.8
Total	6,795	100.0	6,691	100.0	-1.5
			PRIVATE UNIVERSITIES		
Special education	1,116	34.9	949	34.2	-15.0
All other	2,082	65.1	1,822	65.8	-12.5
Total	3,198	100.0	2,771	100.0	-13.4
			PUBLIC FOUR-YEAR COLLEGES		
Special education	3,923	24.9	3,740	26.1	-4.7
All other	11,860	75.1	10,570	73.9	-10.9
Total	15,783	100.0	14,310	100.0	-9.3
			PRIVATE FOUR-YEAR COLLEGES		
Special education	841	23.9	677	23.2	-19.5
All other	2,676	76.1	2,237	76.8	-16.4
Total	3,517	100.0	2,914	100.0	-17.1

Table 3

Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: All Institutions

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	12,324	6.6	12,432	6.8	+.9
Elementary education	55,801	29.7	53,982	29.3	-3.3
Other elementary	854	.5	814	.4	-4.7
Subtotal	*68,979*	*36.7*	*67,228*	*36.5*	*-2.5*
Subject Areas					
Art	6,209	3.3	5,785	3.1	-6.8
Bilingual	825	.4	1,209	.7	+46.5
Business (nonvocational)	5,054	2.7	5,260	2.9	+4.1
English language arts	10,835	5.8	9,957	5.4	-8.1
Foreign languages	3,452	1.8	3,153	1.7	-8.7
Gifted and talented	120	.1	126	.1	+5.0
Health, physical education, recreation	22,842	12.2	22,526	12.2	-1.4
Men	(12,415)	(6.6)	(11,994)	(6.5)	(-3.4)
Women	(10,427)	(5.5)	(10,532)	(5.7)	(+1.0)
Home economics (nonvocational)	2,986	1.6	2,885	1.6	-3.4
Industrial arts (nonvocational)	3,626	1.9	3,534	1.9	-2.5
Mathematics	4,435	2.4	4,039	2.2	-8.9
Music	9,119	4.9	9,258	5.0	+1.5
Natural and physical sciences					
Physics	270	.1	299	.2	+10.7
Chemistry	681	.4	661	.4	-2.9
Biology	3,927	2.1	3,901	2.1	-.7
Geology, earth sciences	537	.3	478	.3	-11.0
Other, including general, science	1,313	.7	1,214	.7	-7.5
Reading	1,376	.7	1,590	.9	+15.6
Social sciences	13,056	6.9	12,971	7.0	-.7
Other subjects	223	.1	204	.1	-8.5
Subtotal	*90,886*	*48.4*	*89,050*	*48.4*	*-2.0*
Vocational Education					
Agriculture	1,571	.8	1,532	.8	-2.5
Distributive education	500	.3	460	.2	-8.0
Health occupations	346	.2	366	.2	+5.8
Occupational home economics	1,745	.9	1,690	.9	-3.2
Office occupations	586	.3	631	.3	+7.7
Technical education	538	.3	537	.3	-.2
Trade and industry	768	.4	819	.4	+6.6
Subtotal	*6,054*	*3.2*	*6,035*	*3.3*	*-.3*
Special Education					
Comprehensive special education	6,506	3.5	6,952	3.8	+6.9
Emotionally disturbed	1,625	.9	1,624	.9	-.1
Learning disabled	3,196	1.7	3,214	1.7	+.6
Mentally retarded	6,228	3.3	5,604	3.0	-10.0
Orthopedically handicapped	428	.2	469	.3	+9.6
Speech impaired	2,287	1.2	2,152	1.2	-5.9
Hearing impaired	1,016	.5	1,005	.5	-1.1
Visually handicapped	222	.1	203	.1	-8.6
Other special education	515	.3	483	.3	-6.2
Subtotal	*22,023*	*11.7*	*21,706*	*11.8*	*-1.4*
Total	187,942	100.0	184,019	100.0	-2.1

Table 4
Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Public Institutions

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	9,933	6.8	9,824	6.9	-1.1
Elementary education	39,784	27.4	37,841	26.6	-4.9
Other elementary	707	.5	750	.5	+6.1
Subtotal	*50,424*	*34.7*	*48,415*	*34.0*	*-4.0*
Subject Areas					
Art	5,120	3.5	4,822	3.4	-5.8
Bilingual	511	.4	643	.5	+25.8
Business (nonvocational)	4,278	2.9	4,427	3.1	+3.5
English language arts	7,863	5.4	7,490	5.3	-4.7
Foreign languages	2,440	1.7	2,264	1.6	-7.2
Gifted and talented	120	.1	126	.1	+5.0
Health, physical education, recreation	18,098	12.5	18,106	12.7	*
Men	(9,510)	(6.5)	(9,392)	(6.6)	(-1.2)
Women	(8,588)	(5.9)	(8,714)	(6.1)	(+1.5)
Home economics (nonvocational)	2,506	1.7	2,493	1.8	-.5
Industrial arts (nonvocational)	3,516	2.4	3,441	2.4	-2.1
Mathematics	3,320	2.3	3,087	2.2	-7.0
Music	6,143	4.2	6,190	4.3	+.8
Natural and physical sciences					
Physics	223	.2	220	.2	-1.3
Chemistry	446	.3	472	.3	+5.8
Biology	2,841	2.0	2,834	2.0	-.2
Geology, earth sciences	435	.3	429	.3	-1.4
Other, including general, science	1,132	.8	1,102	.8	-2.7
Reading	1,108	.8	1,316	.9	+18.8
Social sciences	10,082	6.9	9,752	6.8	-3.3
Other subjects	180	.1	164	.1	-8.9
Subtotal	*70,362*	*48.4*	*69,378*	*48.7*	*-1.4*
Vocational Education					
Agriculture	1,571	1.1	1,532	1.1	-2.5
Distributive education	499	.3	457	.3	-8.4
Health occupations	316	.2	347	.2	+9.8
Occupational home economics	1,645	1.1	1,610	1.1	-2.1
Office occupations	579	.4	631	.4	+9.0
Technical education	538	.4	537	.4	-.2
Trade and industry	768	.5	819	.6	+6.6
Subtotal	*5,916*	*4.1*	*5,933*	*4.2*	*+.3*
Special Education					
Comprehensive special education	5,666	3.9	5,899	4.1	+4.1
Emotionally disturbed	1,380	.9	1,348	.9	-2.3
Learning disabled	2,598	1.8	2,957	2.1	+13.8
Mentally retarded	5,050	3.5	4,726	3.3	-6.4
Orthopedically handicapped	359	.2	398	.3	+10.9
Speech impaired	2,037	1.4	1,877	1.3	-7.9
Hearing impaired	865	.6	847	.6	-2.1
Visually handicapped	198	.1	181	.1	-8.6
Other special education	459	.3	444	.3	-3.3
Subtotal	*18,612*	*12.8*	*18,677*	*13.1*	*+.3*
Total	145,314	100.0	142,403	100.0	-2.0

*Less than .05 percent.

Table 5

Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Private Institutions

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	2,391	5.6	2,608	6.3	+9.1
Elementary education	16,017	37.6	16,141	38.8	+.8
Other elementary	147	.3	64	.2	-56.5
Subtotal	*18,555*	*43.5*	*18,813*	*45.2*	*+1.4*
Subject Areas					
Art	1,089	2.6	963	2.3	-11.6
Bilingual	314	.7	566	1.4	+80.3
Business (nonvocational)	776	1.8	833	2.0	+7.3
English language arts	2,972	7.0	2,467	5.9	-17.0
Foreign languages	1,012	2.4	889	2.1	-12.2
Gifted and talented	0	0	0	0	0
Health, physical education, recreation	*4,744*	*11.1*	*4,420*	*10.6*	*-6.8*
Men	(2,905)	(6.8)	(2,602)	(6.3)	(-10.4)
Women	(1,839)	(4.3)	(1,818)	(4.4)	(-1.1)
Home economics (nonvocational)	480	1.1	392	.9	-18.3
Industrial arts (nonvocational)	110	.3	93	.2	-15.5
Mathematics	1,115	2.6	952	2.3	-14.6
Music	2,976	7.0	3,068	7.4	+3.1
Natural and physical sciences					
Physics	47	.1	79	.2	+68.1
Chemistry	235	.6	189	.5	-19.6
Biology	1,086	2.5	1,067	2.6	-1.7
Geology, earth sciences	102	.2	49	.1	-52.0
Other, including general, science	181	.4	112	.3	-38.1
Reading	268	.6	274	.7	+2.2
Social sciences	2,974	7.0	3,219	7.7	+8.2
Other subjects	43	.1	40	.1	-7.0
Subtotal	*20,524*	*48.1*	*19,672*	*47.3*	*-4.2*
Vocational Education					
Agriculture	0	0	0	0	0
Distributive education	1	*	3	*	+200.0
Health occupations	30	.1	19	*	-36.7
Occupational home economics	100	.2	80	.2	-20.0
Office occupations	7	*	0	0	—
Technical education	0	0	0	0	0
Trade and industry	0	0	0	0	0
Subtotal	*138*	*.3*	*102*	*.2*	*-26.1*
Special Education					
Comprehensive special education	840	2.0	1,053	2.5	+25.4
Emotionally disturbed	245	.6	276	.7	+12.7
Learning disabled	598	1.4	257	.6	-57.0
Mentally retarded	1,178	2.8	878	2.1	-25.5
Orthopedically handicapped	69	.2	71	.2	+2.9
Speech impaired	250	.6	275	.7	+10.0
Hearing impaired	151	.4	158	.4	+4.6
Visually handicapped	24	.1	22	.1	-8.3
Other special education	56	.1	39	.1	-30.4
Subtotal	*3,411*	*8.0*	*3,029*	*7.3*	*-11.2*
Total	42,628	100.0	41,616	100.0	-2.4

*Less than .05 percent.

Table 6

Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Public Universities

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	2,472	5.8	2,463	6.0	-.4
Elementary education	11,728	27.3	11,227	27.3	-4.3
Other elementary	177	.4	172	.4	-2.8
Subtotal	*14,377*	*33.5*	*13,862*	*33.8*	*-3.6*
Subject Areas					
Art	1,553	3.6	1,414	3.4	-9.0
Bilingual	128	.3	146	.4	+14.1
Business (nonvocational)	887	2.1	874	2.1	-1.5
English language arts	2,439	5.7	2,281	5.6	-6.5
Foreign languages	882	2.1	839	2.0	-4.9
Gifted and talented	16	*	25	.1	+56.3
Health, physical education, recreation	5,040	11.7	4,816	11.7	-4.4
Men	(2,428)	(5.7)	(2,279)	(5.5)	(-6.1)
Women	(2,612)	(6.1)	(2,537)	(6.2)	(-2.9)
Home economics (nonvocational)	883	2.1	872	2.1	-1.2
Industrial arts (nonvocational)	795	1.9	769	1.9	-3.3
Mathematics	1,022	2.4	927	2.3	-9.3
Music	1,961	4.6	1,886	4.6	-3.8
Natural and physical sciences					
Physics	62	.1	77	.2	+24.2
Chemistry	113	.3	130	.3	+15.0
Biology	899	2.1	888	2.2	-1.2
Geology, earth sciences	77	.2	82	.2	+6.5
Other, including general, science	476	1.1	470	1.1	-1.3
Reading	234	.5	167	.4	-28.6
Social sciences	2,973	6.9	2,631	6.4	-11.5
Other subjects	56	.1	33	.1	-41.1
Subtotal	*20,496*	*47.8*	*19,327*	*47.1*	*-5.7*
Vocational Education					
Agriculture	1,096	2.6	1,059	2.6	-3.4
Distributive education	213	.5	204	.5	-4.2
Health occupations	81	.2	83	.2	+2.5
Occupational home economics	948	2.2	885	2.2	-6.6
Office occupations	267	.6	266	.6	-.4
Technical education	58	.1	73	.2	+25.9
Trade and industry	464	1.1	472	1.1	+1.7
Subtotal	*3,127*	*7.3*	*3,042*	*7.4*	*-2.7*
Special Education					
Comprehensive special education	1,450	3.4	1,410	3.4	-2.8
Emotionally disturbed	268	.6	246	.6	-8.2
Learning disabled	469	1.1	522	1.3	+11.3
Mentally retarded	1,655	3.9	1,601	3.9	-3.3
Orthopedically handicapped	78	.2	77	.2	-1.3
Speech impaired	514	1.2	514	1.3	0
Hearing impaired	296	.7	312	.8	+5.4
Visually handicapped	77	.2	68	.2	-11.7
Other special education	102	.2	90	.2	-11.8
Subtotal	*4,909*	*11.4*	*4,840*	*11.8*	*-1.4*
Total	42,909	100.0	41,071	100.0	-4.3

*Less than .05 percent.

Table 7

Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Private Universities

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	280	4.0	260	3.7	-7.1
Elementary education	2,004	28.8	1,901	26.9	-5.1
Other elementary	79	1.1	30	.4	-62.0
Subtotal	*2,363*	*34.0*	*2,191*	*31.0*	*-7.3*
Subject Areas					
Art	196	2.8	177	2.5	-9.7
Bilingual	98	1.4	137	1.9	+39.8
Business (nonvocational)	74	1.1	58	.8	-21.6
English language arts	461	6.6	444	6.3	-3.7
Foreign languages	190	2.7	168	2.4	-11.6
Gifted and talented	0	0	0	0	0
Health, physical education, recreation	784	11.3	815	11.5	+4.0
Men	(496)	(7.1)	(486)	(6.9)	(-2.0)
Women	(288)	(4.1)	(329)	(4.6)	(+14.2)
Home economics (nonvocational)	28	.4	19	.3	-32.1
Industrial arts (nonvocational)	14	.2	14	.2	0
Mathematics	200	2.9	198	2.8	-1.0
Music	437	6.3	380	5.4	-13.0
Natural and physical sciences					
Physics	23	.3	17	.2	-26.1
Chemistry	31	.4	28	.4	-9.7
Biology	97	1.4	113	1.6	+16.5
Geology, earth sciences	23	.3	12	.2	-47.8
Other, including general, science	65	.9	57	.8	-12.3
Reading	128	1.8	141	2.0	+10.2
Social sciences	532	7.6	937	13.2	-76.1
Other subjects	2	*	10	.1	+400.0
Subtotal	*3,383*	*48.6*	*3,725*	*52.6*	*+10.1*
Vocational Education					
Agriculture	0	0	0	0	0
Distributive education	1	*	3	*	+200.0
Health occupations	17	.2	0	0	—
Occupational home economics	37	.5	31	.4	-16.2
Office occupations	0	0	0	0	0
Technical education	0	0	0	0	0
Trade and industry	0	0	0	0	0
Subtotal	*55*	*.8*	*34*	*.5*	*-38.2*
Special Education					
Comprehensive special education	445	6.4	476	6.7	+7.0
Emotionally disturbed	163	2.3	151	2.1	-7.4
Learning disabled	91	1.3	102	1.4	+12.1
Mentally retarded	132	1.9	117	1.7	-11.4
Orthopedically handicapped	0	0	0	0	0
Speech impaired	155	2.2	138	2.0	-11.0
Hearing impaired	91	1.3	81	1.1	-11.0
Visually handicapped	24	.3	22	.3	-8.3
Other special education	56	.8	39	.6	-30.4
Subtotal	*1,157*	*16.6*	*1,126*	*15.9*	*-2.7*
Total	6,958	100.0	7,076	100.0	+1.7

*Less than .05 percent.

Table 8

Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Public Four-Year Institutions

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	7,461	7.3	7,361	7.3	-1.3
Elementary education	28,056	27.4	26,614	26.3	-5.1
Other elementary	530	.5	578	.6	+9.1
Subtotal	*36,047*	*35.2*	*34,553*	*34.1*	*-4.1*
Subject Areas					
Art	3,567	3.5	3,408	3.4	-4.5
Bilingual	383	.4	497	.5	+29.8
Business (nonvocational)	3,391	3.3	3,553	3.5	+4.8
English language arts	5,424	5.3	5,209	5.1	-4.0
Foreign languages	1,558	1.5	1,425	1.4	-8.5
Gifted and talented	104	.1	101	.1	-2.9
Health, physical education, recreation	13,058	12.8	13,290	13.1	+1.8
Men	(7,082)	(6.9)	(7,113)	(7.0)	(+.4)
Women	(5,976)	(5.8)	(6,177)	(6.1)	(+3.4)
Home economics (nonvocational)	1,623	1.6	1,621	1.6	-.1
Industrial arts (nonvocational)	2,721	2.7	2,672	2.6	-1.8
Mathematics	2,298	2.2	2,160	2.1	-6.0
Music	4,182	4.1	4,304	4.2	+2.9
Natural and physical sciences					
Physics	161	.2	143	.1	-11.2
Chemistry	333	.3	342	.3	+2.7
Biology	1,942	1.9	1,946	1.9	+.2
Geology, earth sciences	358	.3	347	.3	-3.1
Other, including general, science	656	.6	632	.6	-3.7
Reading	874	.9	1,149	1.1	+31.5
Social sciences	7,109	6.9	7,121	7.0	+.2
Other subjects	124	.1	131	.1	+5.6
Subtotal	*49,866*	*48.7*	*50,051*	*49.4*	*+.4*
Vocational Education					
Agriculture	475	.5	473	.5	-.4
Distributive education	286	.3	253	.2	-11.5
Health occupations	235	.2	264	.3	+12.3
Occupational home economics	697	.7	725	.7	+4.0
Office occupations	312	.3	365	.4	+17.0
Technical education	480	.5	464	.5	-3.3
Trade and industry	304	.3	347	.3	+14.1
Subtotal	*2,789*	*2.7*	*2,891*	*2.9*	*+3.7*
Special Education					
Comprehensive special education	4,216	4.1	4,489	4.4	+6.5
Emotionally disturbed	1,112	1.1	1,102	1.1	-.9
Learning disabled	2,129	2.1	2,435	2.4	+14.4
Mentally retarded	3,395	3.3	3,125	3.1	-8.0
Orthopedically handicapped	281	.3	321	.3	+14.2
Speech impaired	1,523	1.5	1,363	1.3	-10.5
Hearing impaired	569	.6	535	.5	-6.0
Visually handicapped	121	.1	113	.1	-6.6
Other special education	357	.3	354	.3	-.8
Subtotal	*13,703*	*13.4*	*13,837*	*13.7*	*+1.0*
Total	102,405	100.0	101,332	100.0	-1.0

Table 9
Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Private Four-Year Institutions

Teaching Specialty	9/1/77 - 8/31/78 Number	%	9/1/78 - 8/31/79 Number	%	% Change in Number
Elementary Education					
Early childhood education	2,111	5.9	2,348	6.8	+11.2
Elementary education	14,013	39.3	14,240	41.2	+1.6
Other elementary	68	.2	34	.1	-50.0
Subtotal	*16,192*	*45.4*	*16,622*	*48.1*	*+2.7*
Subject Areas					
Art	893	2.5	786	2.3	-12.0
Bilingual	216	.6	429	1.2	+98.6
Business (nonvocational)	702	2.0	775	2.2	+10.4
English language arts	2,511	7.0	2,023	5.9	-19.4
Foreign languages	822	2.3	721	2.1	-12.3
Gifted and talented	0	0	0	0	0
Health, physical education, recreation	3,960	11.1	3,605	10.4	-9.0
Men	(2,409)	(6.8)	(2,116)	(6.1)	(-12.2)
Women	(1,551)	(4.3)	(1,489)	(4.3)	(-4.0)
Home economics (nonvocational)	452	1.3	373	1.1	-17.5
Industrial arts (nonvocational)	96	.3	79	.2	-17.7
Mathematics	915	2.6	754	2.2	-17.6
Music	2,539	7.1	2,688	7.8	+5.9
Natural and physical sciences					
Physics	24	.1	62	.2	+158.3
Chemistry	204	.6	161	.5	-21.1
Biology	989	2.8	954	2.8	-3.5
Geology, earth sciences	79	.2	37	.1	-53.2
Other, including general, science	116	.3	55	.2	-52.6
Reading	140	.4	133	.4	-5.0
Social sciences	2,442	6.8	2,282	6.6	-6.6
Other subjects	41	.1	30	.1	-26.8
Subtotal	*17,141*	*48.1*	*15,947*	*46.2*	*-7.0*
Vocational Education					
Agriculture	0	0	0	0	0
Distributive education	0	0	0	0	0
Health occupations	13	*	19	.1	+46.2
Occupational home economics	63	.2	49	.1	-22.2
Office occupations	7	*	0	0	—
Technical education	0	0	0	0	0
Trade and industry	0	0	0	0	0
Subtotal	*83*	*.2*	*68*	*.2*	*-18.1*
Special Education					
Comprehensive special education	395	1.1	577	1.7	+46.1
Emotionally disturbed	82	.2	125	.4	+52.4
Learning disabled	507	1.4	155	.4	-69.4
Mentally retarded	1,046	2.9	761	2.2	-27.2
Orthopedically handicapped	69	.2	71	.2	+2.9
Speech impaired	95	.3	137	.4	+44.2
Hearing impaired	60	.2	77	.2	+28.3
Visually handicapped	0	0	0	0	0
Other special education	0	0	0	0	0
Subtotal	*2,254*	*6.3*	*1,903*	*5.5*	*-15.6*
Total	35,670	100.0	34,540	100.0	-3.2

*Less than .05 percent.

APPENDIX A: Survey Instrument

AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE
WASHINGTON, D. C. 20036

HIGHER EDUCATION PANEL
(202) 833-4757

November 22, 1978

Dear Higher Education Panel Representative:

Enclosed is the forty-fifth survey of the Higher Education Panel, "Survey of Teacher Education." Part I of the survey is sponsored by the National Center for Education Statistics (NCES), U.S. Department of Health, Education, and Welfare. It seeks information, by teaching specialty, on the number of individuals who are completing for the first time all requirements to teach in elementary and/or secondary school. Part II concerning teaching courses is included at the request of the National Science Foundation.

The information obtained from your institution will help provide a picture of the national supply/demand situation for teachers. More specifically it will assist the Congress in considering new legislation, modifying existing legislation, and in establishing funding levels for federal education programs. Institutions of higher education will find the data useful in planning education training programs.

Through a field test of this survey we learned that officials who are best able to respond to the questionnaire are the deans of the school of education and the registrars. As usual, however, we leave the choice of the most appropriate respondent to you.

Please understand that responses for your institution will be held in strictest confidence. As with all our surveys, the data you provide will be reported in summary fashion only and will not be identifiable with your institution. This survey is authorized by the National Science Foundation Act of 1950, as amended. While you are not required to respond, your cooperation is needed to make the results comprehensive, reliable, and timely.

Please return the completed questionnaire to us by December 15, 1978. A prepaid return envelope has been enclosed for your convenience. If you have any problems or questions, please do not hesitate to telephone us collect at 202-833-4757.

Thank you for your continuing cooperation.

Sincerely,

Frank J. Atelsek

Frank J. Atelsek
Panel Director

American Council on Education
Higher Education Panel Survey No. 45

SURVEY OF TEACHER EDUCATION

OMB #099-R0265
Exp. 6/81

I. Please report the number of people who completed **for the first time** all requirements to teach in elementary and/or secondary school.
PLEASE READ ALL INSTRUCTIONS CAREFULLY. PLEASE REPORT EACH PERSON ONLY ONCE.

INSTRUCTIONS

1. To complete column 1, include people who BOTH received their BA anytime before 9/1/78 AND completed all requirements to teach, including practice teaching, during the period 9/1/77 through 8/31/78. Do not include people who received a standard teaching certificate in any field prior to 9/1/77.

2. To complete column 2, the dates are moved ahead one year: include people who will have BOTH received their BA anytime before 9/1/79 AND completed all requirements to teach, including practice teaching, during the period 9/1/78 through 8/31/79. Do not include people who received a standard teaching certificate in any field prior to 9/1/78. Please provide your best estimate.

3. If BA recipients graduating with both a major and a minor in education are qualified to teach both specialties, report only the major specialty. If others complete all requirements to teach in more than one specialty field, report that field for which the person is best prepared.

4. Include individuals completing all requirements to teach who received their degrees in fields other than education.

5. Exclude persons whose only specialty field is education administration.

A. Bachelor's Degree Recipients (those who received the degree **anytime** before September 1, 1978 for **column 1** and September 1, 1979 for **column 2**)

TEACHING SPECIALTY FIELD (see selected definitions)	(1) Persons completing requirements for the first time to teach, 9/1/77 through 8/31/78	(2) Persons completing requirements for the first time to teach, 9/1/78 through 8/31/79 (estimate)
Elementary education		
Early childhood education (pre-primary—grade 3)		
Elementary education		
Other elementary (specify): _____		
Subject areas (elementary and/or secondary)		
Art		
Bilingual		
Business (nonvocational)		
English language arts		
Foreign languages		
Gifted and talented		
Health, physical education, recreation (report by sex)		
Men		
Women		
Home economics (nonvocational)		
Industrial arts (nonvocational)		
Mathematics		
Music		
Natural and physical sciences		
Physics		
Chemistry		
Biology		
Other, including general science (specify: _____)		
Reading		
Social sciences		
Other subjects (specify) _____		
Vocational education		

6. Report each person in the one teaching specialty field listed which best matches the field in which the person has received training. If there is no similarity at all between the field in which the person has received training and any of the fields listed, report the person in an other category.

(Please note that the list of teaching specialty fields is slightly different from the HEGIS taxonomy. Because of the sponsor's needs, some fields are disaggregated.)

SEE FIELD DEFINITIONS OVER

Distributive education		
Health occupations		
Occupational home economics		
Office occupations		
Technical education		
Trade and industry		
Special education (elementary and/or secondary)		
Comprehensive special education		
Emotionally disturbed		
Learning disabled		
Mentally retarded		
Orthopedically handicapped		
Speech impaired		
Hearing impaired		
Visually handicapped		
Other special education (specify)		
_____		

7. To complete part B, follow instructions 1 through 5 for part A, substituting master's degree recipients for bachelor's degree recipients.

B. Master's Degree Recipients (those who received the degree **anytime** before September 1, 1978 for **column 1** and September 1, 1979 for **column 2**).

TEACHING SPECIALTY FIELD	(1) Persons completing requirements for the first time to teach, 9/1/77 through 8/31/78	(2) Persons completing requirements for the first time to teach, 9/1/78 through 8/31/79 (estimate)
MA in special education (including specialty fields)		
MA in all other fields		

II. COURSES DESIGNED FOR TEACHING AT THE JUNIOR HIGH OR MIDDLE SCHOOL LEVELS:

Do not count elementary or secondary education courses that may include junior high or middle school teaching as only a component of more general coverage.

A **course** is a formally offered unit of instruction for which academic credit is earned, comprised of 22.5 clock hours or more of instructional contact, or the equivalent.

If an undergraduate course may be taken for graduate credit, **count it as an undergraduate course.**

How many undergraduate and graduate courses does your institution offer which are **specifically designed for teaching at the junior high school and/or middle school levels?**

_____ Number of undergraduate courses

_____ Number of graduate courses

THANK YOU FOR YOUR ASSISTANCE.

Please return this form by December 15, 1978

TO: HIGHER EDUCATION PANEL
AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE, N.W.
WASHINGTON, D.C. 20036

PLEASE KEEP A COPY OF THIS FORM FOR YOUR RECORDS.

Respondent's Name _____

Office _____ Telephone _____

If you have any questions please call (collect) 202/833-4757.

Selected Teaching Specialty Field Definitions

Elementary

Early childhood education. Preparation to teach children in nursery, kindergarten, and/or primary grades 1-3.

Elementary education. Preparation to teach children in a general, nonspecialized educational program in any grade between kindergarten and grade 8.

Subject areas (elementary and/or secondary)

Bilingual. Preparation to teach academic subjects to pupils with limited English-speaking ability, using the English language and one other language with equal proficiency.

Business education. Preparation to teach business courses in an academic (nonvocational) setting.

English language arts. Preparation to teach the English language arts as a specialized subject matter, as in a high, junior high, or middle school. Include speech and drama teachers but exclude reading or ESL/EFL teachers.

Foreign languages. Preparation to teach English as a foren or second language.

Gifted and talented. Preparation to teach children capable of high performance, including those with demonstrated achievement or ability in general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, or psychomotor ability.

Health, physical education, recreation. Also include persons preparing to teach driver and safety education or to hold full-time athletics post.

Home economics education. Preparation to teach nonvocational home economics.

Industrial arts. Preparation to teach nonvocational industrial arts.

Reading. Preparation to teach reading as a separate subject, as distinct from English language arts.

Social sciences. Preparation to teach history, civics, social studies, and related subjects.

Vocational education

Health occupations. Preparation to train persons for occupations in the health field which are supportive to health professions.

Special education (elementary and/or secondary)

Comprehensive special education. Preparation to teach children mildly to moderately handicapped whose physical, emotional, mental or social needs require a special curriculum.

Learning disabled. Preparation to teach children who have disorders in one or more of the basic psychological processes involved in understanding of in the use of language, either of which may be manifested in an imperfect ability to listen, think, speak, read, spell, or to do mathematical calculations. These disorders include perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Orthopedically handicapped. Preparation to teach children who have severe orthopedic impairments which adversely affect their educational performance.

Speech impaired. Preparation to teach children who have a speech or language impairment which adversely affects their educational performance.

APPENDIX B: Methodology

The survey instrument was mailed on November 22, 1978, to the 438 Panel member institutions who, according to The College Handbook Index of Majors (New York: College Entrance Examination Board, 1977), offered programs in teacher preparation. By the close of the field phase, 384 institutions, or 88 percent of those surveyed, had provided usable responses.

Response to the Survey

Public universities had the highest response rate (95 percent), followed by institutions enrolling more than 10,000 FTE undergraduates (94 percent). Colleges and universities in the East and private four-year colleges had the lowest response rates (81 percent and 82 percent, respectively).

Table B-1: Comparison of Respondents and Nonrespondents

Characteristic	Respondents (N=384)	Nonrespondents (N=54)	Response Rate
Total	100.0	100.0	87.7
Control			
Public	64.6	55.6	89.2
Private	35.4	44.4	85.0
Full type			
Public university	26.6	9.3	95.3
Private university	13.3	11.1	89.5
Public four-year college	38.0	46.3	85.4
Private four-year college	22.1	33.3	82.5
Census region			
East	21.9	40.0	80.8
Midwest	28.4	16.0	93.2
South	32.3	34.0	87.9
West	17.4	10.0	93.1
Undergraduate FTE enrollment			
1,000 or less	9.4	11.1	85.7
1,001-4,999	38.0	53.7	83.4
5,000-9,999	28.1	24.1	89.3
10,000 or more	24.5	11.1	94.0
Graduate FTE			
200 or less	26.6	37.0	83.6
201-1,000	37.0	31.5	89.3
1,001-3,000	27.9	24.1	89.2
More than 3,000	8.6	7.4	89.2

Weighting

Statistical adjustment of survey responses to develop national estimates was accomplished in two stages. The first stage adjusted for institutional nonresponse within the eligible sample. Each data item was weighted within each stratification cell, by the ratio of the number of institutions in the Panel to the number of institutions that responded to the survey item. The second stage adjusted the sample data to represent the entire population.

Weights were computed on the assumption that within each stratification cell, institutions with teacher education programs in the Panel were representative of those in the entire population. That is, if 75 percent of the Panel institutions in a particular cell offered teacher preparation, it was assumed that 75 percent of all institutions in that particular cell offered teacher preparation.

Weights were derived separately to allow for differential item response. The resulting cell and item weights were applied to the responses of each institution, and the weighted data were then aggregated into the broad institutional categories used in the survey analysis.

Two separate populations were used in weighting the survey responses: For data items related to bachelor's-level teachers, institutions which award the B.A. degree were used. For data items related to master's-level teachers, the population was limited to institutions which award an advanced degree.

Survey Population

A survey population was estimated because of the inconsistencies between the available listings of institutions that provide teacher training. Some institutions listed in the Education Directory as offering teacher preparation were excluded from the listing of earned degrees in education (131, 10 percent); some contained in the latter listing were omitted from the former (54, 4 percent). Moreover, a later comparison indicated that some institutions that responded to the HEP survey and reported having new teachers were omitted from one or both sources (14, 4 percent).

At the request of the survey sponsor, we conducted a simple analysis of the appropriateness of the Panel design to this survey and, further, of the validity of the assumption that institutions with teacher education programs in the Panel were representative of those in the entire population. This analysis consisted of comparing a known variable--earned degrees conferred in education--with the estimate of that variable obtained by using the Panel survey design. Education degrees awarded by all Panel members were aggregated, separately by stratification cell and by degree level. The net Panel weights (the number of population institutions divided by the number of Panel institutions) for each cell were applied to the aggregates, creating population estimates of earned degrees conferred in education. When compared to the known count of education degrees conferred, the estimates came well within tolerable limits: the estimate of BA degrees was 0.1 percent below the actual, and the estimate of MA degrees was 3.7 percent above the actual.

Reliability of the Estimates

Since the statistics presented in this report are based on a sample, they will differ somewhat from the figures which would have been obtained if a complete census had been taken using the same survey instrument, instructions, and procedures. As in any survey, the results are also subject to reporting and processing errors and errors due to nonresponse. To the extent possible, these types of errors were kept to a minimum by methods built into the survey procedures.

The standard error is primarily a measure of sampling variability; that is, the variations that might occur by chance because only a sample of the institutions is surveyed. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 90 out of 100 that the difference would be less than 1.65 times the standard error; and 95 out of 100 that the difference would be less than 1.96 times the standard error; and about 99 out of 100 that it would be less than 2.5 times as large. Thus,

knowing the standard error permits us to specify with a stated confidence the range within which a given percentage would lie if a complete census, rather than a sample survey, had been conducted.

Tables B-2 and B-3 present 90 percent confidence intervals for survey estimates representing all institutions.

Table B-2: Bachelor's Recipients Newly Qualified to Teach, By Specialty Field, 1977-78 and 1978-79: Population Estimates and 90 Percent Confidence Intervals

Teaching Specialty	1977-78 Estimate	1977-78 Confidence Interval (+ or -)	1978-79 Estimate	1978-79 Confidence Interval (+ or -)	% Change	Confidence Interval of % Change (+ or -)
Elementary Education						
Early childhood education	12,324	2,734	12,432	2,731	+.9	5.9
Elementary education	55,801	2,465	55,982	2,929	-3.3	2.1
Other elementary	854	449	814	399	-4.7	21.9
Subject Areas						
Art	6,209	643	5,785	444	-6.8	3.6
Bilingual	825	363	1,209	732	+46.5	26.2
Business (nonvocational)	5,054	1,413	5,260	1,242	+4.1	9.2
English language arts	10,835	545	9,957	514	-8.1	3.5
Foreign languages	3,452	261	3,153	136	-8.7	4.7
Gifted and talented	120	*	126	7	+5.0	*
Health, physical education, recreation	22,842	2,642	22,526	3,025	-1.4	3.5
Men	(12,415)	(1,267)	(11,994)	(1,494)	(-3.4)	4.6
Women	(10,427)	(1,643)	(10,532)	(1,603)	(+1.0)	3.5
Home economics (nonvocational)	2,986	387	2,885	413	-3.4	1.5
Industrial arts (nonvocational)	3,626	1,279	3,534	1,342	-2.5	5.0
Mathematics	4,435	386	4,039	436	-8.9	7.1
Music	9,119	1,171	9,258	1,275	+1.5	4.6
Natural and physical sciences						
Physics	270	56	299	35	+10.7	14.9
Chemistry	681	87	661	153	-2.9	15.8
Biology	3,927	514	3,901	566	-.7	7.1
Geology, earth sciences	537	68	478	51	-11.0	4.8
Other, including general, science	1,313	216	1,214	168	-7.5	10.1
Reading	1,376	278	1,590	146	+15.6	15.4
Social sciences	13,056	1,250	12,971	902	-.7	5.1
Other subjects	223	46	204	26	-8.5	10.7
Vocational Education						
Agriculture	1,571	125	1,532	123	-2.5	0.3
Distributive education	500	37	460	90	-8.0	11.8
Health occupations	346	171	366	202	+5.8	3.5
Occupational home economics	1,745	194	1,690	123	-3.2	4.4
Office occupations	586	23	631	21	+7.7	0.9
Technical education	538	128	537	128	-.2	0.5
Trade and industry	768	7	819	7	+6.6	0.2
Special Education						
Comprehensive special education	6,506	1,190	6,952	1,431	+6.9	5.7
Emotionally disturbed	1,625	202	1,624	145	-.1	4.6
Learning disabled	3,196	687	3,214	409	+.6	12.8
Mentally retarded	6,228	762	5,604	439	-10.0	5.7
Orthopedically handicapped	428	133	469	162	+9.6	8.6
Speech impaired	2,287	156	2,152	178	-5.9	2.7
Hearing impaired	1,016	141	1,005	142	-1.1	3.4
Visually handicapped	222	70	203	70	-8.6	2.6
Other special education	515	*	483	30	-6.2	*

*Confidence interval not measurable.

Table B-3: Master's Recipients Newly Qualified to Teach, 1977-78 and 1978-79: Population Estimates and 90 Percent Confidence Intervals

Teaching Specialty	1977-78 Estimate	1977-78 Confidence Interval (+ or -)	1978-79 Estimate	1978-79 Confidence Interval (+ or -)	% Change	Confidence Interval of % Change (+ or -)
Special Education	7,076	718	6,613	1,040	-6.5	9.5
All Other Fields	22,217	2,744	20,073	2,808	-9.7	3.6

Comparisons with other Survey Data

Readers should be strongly cautioned against comparing the findings from the separate studies conducted by the National Education Association, the National Center for Education Statistics, and the Higher Education Panel. Their respective methodologies, definitions, and populations differ so significantly as to prevent reasonable comparisons.

NEA annually surveys the universe of colleges and universities offering teacher preparation programs, principally through cooperation with state education agencies. In states where no agency cooperates in the survey (approximately ten states), NEA surveys the institutions directly. No weighting techniques are employed, and no imputations are made for nonresponse. The 1978 NEA survey, recently published, reported 12 percent fewer newly qualified teachers than the HEP survey for the same year.

The Recent College Graduate Survey conducted by NCES was based on a sample of college graduates (1974-75 in one study, 1976-77 in a more recent study) from a sample of all colleges and universities. Survey findings were weighted to national estimates using ratio estimation procedures. Findings from the 1974-75 NCES survey are not comparable with findings from the 1976-77 NCES survey because of changes in definitions. Further, the NCES surveys excluded certain kinds of teachers who were included in the HEP survey, notably those who had received their degrees any time before they became qualified to teach.

The HEP survey queried more than four hundred institutions with teacher education programs. Results were institutionally weighted to represent a population of 1,252

institutions that award a bachelor's degree and 792 institutions that award an advanced degree.

Given the known differences in survey methodologies and definitions, and the unknown differences in survey populations, direct comparisons among the three surveys cannot and should not be made.

Other Reports of the Higher Education Panel
American Council on Education

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